

REMARKS

This is in response to the Office Action dated February 13, 2001, and the Examiner Interview held on August 1, 2001. Reconsideration and withdrawal of the new rejections and objections raised in the Office Action are respectfully requested. Applicants' representatives appreciate the courtesies extended to them by Examiners Luong and Bucci during the interview conducted on August 1, 2001. During the interview, applicants' representatives and the Examiners discussed the rejection based on the recapture rule. Applicants representatives explained that the limitations being added are essentially the same as those being deleted from the patented claims, and that the language of the original limitation (i.e., the reinforcing member first portion) being deleted was originally presented based on older patent practice that discouraged claiming of intangible elements, *per se*. Applicants representatives also explained that the facts of this case are similar to those in *In re Richman*, previously cited and discussed, and that CCPA precedent is binding on both the Patent Office and Federal Circuit panel decisions the Patent Office is relying upon.

The distinction between the product and method claims was also discussed, namely, that the method and product claims are different statutory classes of invention. In view of this difference, there is no recapture of method claims that were never previously presented.

With respect to the remark in the Interview Summary regarding the alleged lack of the range 600 kg/mm to 2,200 kg/mm in claims 69 and 72, applicants submit this is not an issue. Both independent claims 69 and 72 recite this limitation. Moreover, patent claim 8 does not recite this limitation. This was pointed out at the interview by applicants' representatives.

In view of the interview and outstanding Office Action, applicants are filing concurrently herewith a Notice of Appeal. The Notice of Appeal is believed to be appropriate because the product claims introduced were finally rejected in the Office Action dated February 24, 2000.

12. A flywheel assembly according to claim 9, further comprising a first fastening means for fastening said outer portions of said elastic member and said flywheel member together, and a second fastening means for fastening said inner portions of said elastic member and said reinforcing member to said shaft end of said driving shaft, each of said first and second fastening means comprises screw fasteners extending axially along an axis of said driving shaft.]

Please added the following new claims:

101. A flywheel assembly for a power transmission system for transmitting engine torque, comprising:

an elastic plate secured to a crankshaft to rotate therewith;

a flywheel body secured to said elastic plate and having an engaging surface for engaging with a clutch disc; and

a reinforcing member for reinforcing said elastic plate at a portion of said elastic plate which is secured to said crankshaft;

said elastic plate having an axial rigidity in the range of 600 kg/mm to 2200 kg/mm so as to ensure transmission of engine torque through said flywheel assembly while decreasing noise produced by a bending vibration of said crankshaft;

wherein each of said elastic plate, said flywheel body and said reinforcing member comprises a first portion, said first portion of said flywheel body being placed axially between said first portions of said elastic plate and said reinforcing member, and said first portions of said elastic plate, said flywheel body and said reinforcing member defining clearances for allowing said first portion of said flywheel body to move axially between said first portions of said elastic plate and said reinforcing member.

102. A flywheel assembly as set forth in claim 101, wherein said axial rigidity is in the range of 600 kg/mm to 1700 kg/mm.

103. A flywheel assembly as set forth in claim 102, wherein an axial run-out of said engaging surface when rotated by said crankshaft is no more than 0.1 mm.

<sup>A</sup>  
~~104.~~ A flywheel assembly according to claim ~~101~~, wherein said reinforcing member (4) and said elastic plate (2) are fastened to said crankshaft (1) by a fastening means (3), and said elastic plate is clamped between said crankshaft and said reinforcing member.

<sup>5</sup>  
<sup>A</sup>  
~~105.~~ A flywheel assembly according to claim ~~104~~, wherein said elastic plate is circular and comprises an outer peripheral portion (2b) surrounding said first portion of said elastic plate, so that said first portion of said elastic plate is an inner portion of said elastic plate, said flywheel body comprises an outer peripheral portion (5a) which surrounds said first portion of said flywheel body, so that said first portion of said flywheel body is an inner portion of said flywheel body, said outer peripheral portions of said elastic plate and said flywheel body are fastened together by a second fastening means (6), said inner portion of said flywheel body comprises an inwardly facing inside cylindrical surface defining a central circular hole (5b), said reinforcing member comprises a cylindrical portion (4a) which is received in said circular hole (5b) of said flywheel body, and comprises an outwardly facing outside cylindrical surface surrounded by said inwardly facing cylindrical surface of said flywheel body, said first portion of said reinforcing member is in the form of an outward flange (4b), said first portion of said flywheel body is mounted on said cylindrical portion of said reinforcing member, and said cylindrical portion of said reinforcing member is sized to allow said first portion of said flywheel body to slide axially between said inner portion of said elastic plate and said outward flange of said reinforcing member.

<sup>6</sup>  
<sup>A</sup>  
~~106.~~ A flywheel assembly according to claim ~~104~~, wherein said inner portion of said flywheel body comprises a first surface (5f) which is substantially parallel to said engaging surface (5g) and which faces toward said elastic plate, and a second surface (5d) which is substantially parallel to said engaging surface and which faces toward said outward flange of said reinforcing member, said inner portion of said elastic plate comprising an abutting surface confronting said first surface of said flywheel body and limiting an axial movement of said inner portion of said flywheel body by abutting against said first surface of said flywheel body, said outward flange of said reinforcing member comprises an abutting surface confronting said second surface of said flywheel body and

limiting the axial movement of said inner portion of said flywheel body by abutting against said second surface of said flywheel body, an axial distance between said first and second surfaces of said flywheel body is smaller than an axial distance between said abutting surfaces of said elastic member and said reinforcing member.

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cont  
107.<sup>7</sup> A flywheel assembly according to claim 106<sup>6</sup>, wherein said second surface (5d) of said inner portion of said flywheel body is located axially between said first surface (5f) and said engaging surface (5g) of said flywheel body.

108.<sup>8</sup> A flywheel assembly for a power transmission system for transmitting engine torque, comprising:

an elastic plate secured to a crankshaft to rotate therewith;

a flywheel body secured to said elastic plate and having an engaging surface for engaging with a clutch disc; and

a reinforcing member for reinforcing said elastic plate at a portion of said elastic plate which is secured to said crankshaft; and

said engaging surface having an axial run-out which is equal to or less than 0.1 mm;

wherein each of said elastic plate, said flywheel body and said reinforcing member comprises a first portion, said first portion of said flywheel body being placed axially between said first portions of said elastic plate and said reinforcing member, and said first portions of said elastic plate, said flywheel body and said reinforcing member defining clearances for allowing said first portion of said flywheel body to move axially between said first portions of said elastic plate and said reinforcing member.

109.<sup>9</sup> A flywheel assembly comprising:  
a crankshaft (1) for transmitting torque;  
a circular elastic plate (2) comprising an outer portion and an inner portion and extending radially inwardly from said outer portion to said inner portion, said inner portion of said elastic plate being fastened to a shaft end of said crankshaft;

an annular flywheel body (5) comprising an outer portion and an inner portion and extending radially inwardly from said outer portion to said inner portion

of said flywheel body, said outer portion of said flywheel body being fastened to said outer portion of said elastic plate, said inner portion of said flywheel body comprising a central circular hole; and

*12 cont*  
a reinforcing member (4) comprising a cylindrical portion (4a) axially extending from a first member end to a second member end, an inner portion extending radially inwardly from said first member end of said cylindrical portion, and an outward flange (4b) extending radially outwardly from said second member end of said cylindrical portion, said inner portion of said reinforcing member being fastened to said shaft end of said crankshaft, said cylindrical portion of said reinforcing member being fit in said circular hole of said flywheel body with a clearance to form a loose fit;

wherein said inner portion of said elastic plate is fixedly clamped between said shaft end of said crankshaft and said inner portion of said reinforcing member, said inner portion of said flywheel body is fit over said cylindrical portion of said reinforcing member and located axially between said inner portion of said elastic plate and said outward flange of said reinforcing member, said outward flange is axially spaced from said inner portion of said elastic plate at an axial distance which allows axial movement of said inner portion of said flywheel body between said inner portion of said elastic plate and said outward flange of said reinforcing member.

*10*  
110. A flywheel assembly according to claim *9* 109, wherein said elastic plate has an axial rigidity which is in the range of 600 kg/mm to 2200 kg/mm.

*11*  
111. A flywheel assembly according to claim *9* 109, wherein a wall thickness of said inner portion of said reinforcing member is greater than a wall thickness of each of said outward flange of said reinforcing member and said inner portion of said elastic plate said wall thickness of each of said inner portion and said outward flange of said reinforcing member and said inner portion of said elastic plate being a dimension measured in an axial direction parallel to an axis of said crankshaft.

*12*  
112. A flywheel assembly according to claim *9* 109, further comprising a first fastening means for fastening said outer portions of said elastic plate and said flywheel body together, and a second fastening means for fastening said inner portions of said elastic

plate and said reinforcing member to said shaft end of said crankshaft, each of said first and second fastening means comprises screw fasteners extending axially along an axis of said crankshaft.

<sup>13</sup>  
113. A flywheel assembly for a power transmission system for transmitting engine torque comprising:

a crankshaft;

an elastic plate comprising an inner portion secured to a shaft end of said crankshaft;

a flywheel body secured to said elastic plate and having an engaging surface for engaging with the clutch disc; and

a reinforcing member for reinforcing said elastic plate at said inner portion of said elastic plate;

wherein said elastic plate has an axial rigidity in the range of 600 kg/mm to 2200 kg/mm so as to ensure transmission of engine torque through said flywheel assembly, while decreasing noise produced by a bending vibration of said crankshaft;

wherein said elastic plate is clamped axially between said reinforcing member and said shaft end of said crankshaft, and

wherein a first portion of said flywheel moves axially with respect to said reinforcing member and said elastic plate,

wherein said reinforcing member has a radially extending portion which extends at least inwardly of said flywheel body, and wherein said elastic plate comprises a first portion, said first portion of said flywheel body being placed axially after said first portion of said elastic plate, and said first portions of said flywheel body and said elastic plate defining a first clearance and said flywheel body having a first free space on a side opposite of the first clearance for allowing said first portion of said flywheel body to move axially within the first clearance and the free space.

<sup>14</sup>  
114. A flywheel assembly as set forth in Claim <sup>13</sup>113, wherein said flywheel body comprises an inner portion defining a circular central hole, and an outer portion surrounding said inner portion of said flywheel body; said elastic plate comprises an outer portion which surrounds said inner portion of said elastic plate and which is fixed to said

outer portion of said flywheel body; said reinforcing member is fit in said central hole of said flywheel body with a clearance to form a loose fit; and said reinforcing member comprises an outer circumferential surface for allowing said inner portion of said flywheel body to move axially to said elastic plate without limiting an axial movement of the inner portion of said flywheel body toward said elastic plate.

<sup>12</sup>  
<sup>15</sup> ~~115.~~ A flywheel assembly as set forth in Claim <sup>14</sup>~~114~~, wherein said reinforcing member extends axially from a first member end defined by a radially extending abutment surface held in contact with said elastic plate, to a second member end; said outer circumferential surface of said reinforcing member extends from said abutment surface toward said second member end of said reinforcing member; said outer circumferential surface of said reinforcing member comprises an outer cylindrical surface section fit in said central hole of said flywheel body, and an outer curved surface section which extends continuously from said outer cylindrical surface section to said abutment surface; and said curved surface section is a surface of revolution whose diameter decreases continuously from a diameter of said cylindrical surface section toward said abutment surface.

<sup>16</sup> ~~116.~~ A flywheel assembly as set forth in Claim <sup>15</sup>~~115~~, wherein said flywheel body comprises a side surface facing toward said elastic plate, and said engaging surface which faces away from said elastic plate and which extends in an imaginary flat plane; and said second member end of said reinforcing member is located axially between said engaging surface and said side surface of said flywheel body and away from said imaginary flat plane.

<sup>17</sup> ~~117.~~ A flywheel assembly as set forth in Claim <sup>13</sup>~~113~~, wherein said flywheel body comprises an inner portion defining a circular central hole, and an outer portion surrounding said inner portion of said flywheel body; said elastic plate comprises an outer portion which surrounds said inner portion of said elastic plate and which is fixed to said outer portion of said flywheel body; and said reinforcing member comprises an outer circumferential surface allowing said inner portion of said flywheel body to move axially toward said elastic plate without limiting an axial movement of the inner portion of said flywheel body toward said elastic plate.

<sup>18</sup>  
~~118.~~ A flywheel assembly as set forth in Claim ~~113~~<sup>13</sup>, wherein said flywheel body comprises a side surface facing toward said elastic plate, and said engaging surface which faces away from said elastic plate; and said reinforcing member comprises a radially extending abutment surface held in contact with said elastic plate, and an outer circumferential curved surface which extends continuously from said abutment surface to a curved surface end which is located axially between said side surface of said flywheel body and said engaging surface of said flywheel body.

<sup>13</sup>  
~~119.~~ A flywheel assembly as set forth in Claim ~~118~~<sup>18</sup>, wherein said outer circumferential curved surface of said reinforcing member is a surface of revolution whose diameter increases continuously from said abutment surface of said reinforcing member to said curved surface end of said outer circumferential curved surface.

<sup>20</sup>  
~~120.~~ A flywheel assembly as set forth in Claim ~~118~~<sup>18</sup>, wherein said reinforcing member extends axially from a first member end defined by said abutment surface to a second member end which is located axially between said engaging surface and said side surface of said flywheel body; and an axial distance of said second member end of said reinforcing member from said abutment surface of said reinforcing member is smaller than an axial distance of said engaging surface of said flywheel body from said abutment surface of said reinforcing member.

<sup>21</sup>  
~~121.~~ A flywheel assembly as set forth in Claim ~~118~~<sup>18</sup>, wherein said engaging surface of said flywheel body extends in an imaginary flat plane; and said reinforcing member extends axially from a first member end defined by said abutment surface to a second member end which is located axially between said engaging surface and said side surface of said flywheel body and which is away from said imaginary flat plane.

<sup>22</sup>  
~~122.~~ A flywheel assembly as set forth in Claim ~~118~~<sup>18</sup>, wherein said flywheel body comprises an inner portion defining a circular central hole, and an outer portion surrounding said inner portion of said flywheel body; said elastic plate comprises an outer portion which surrounds said inner portion of said elastic plate and which is fixed to said



outer portion of said flywheel body; said reinforcing member comprises a received portion which is received in said central hole of said flywheel body; and said outer curved surface of said reinforcing member extends continuously from said abutment surface to said received portion.

123. <sup>23</sup> A flywheel assembly as set forth in Claim <sup>22</sup>122, wherein said received portion of said reinforcing member comprises a cylindrical outside surface received in said central hole of said flywheel body, and the diameter of said curved surface increases continuously from said abutment surface to a diameter of said cylindrical surface of said reinforcing member.

124. <sup>24</sup> A flywheel assembly as set forth in Claim <sup>21</sup>121, wherein said axial rigidity is in the range of 600 kg/mm to 1700 kg/mm.

125. <sup>25</sup> A flywheel assembly as set forth in Claim <sup>21</sup>121, wherein an axial run-out of said engaging surface when rotated by said crankshaft is no more than 0.1 mm.

126. <sup>26</sup> A flywheel assembly as set forth in Claim <sup>25</sup>125, wherein said engaging surface of said flywheel body is formed so as to make the axial run-out no more than 0.1 mm by processing said engaging surface of said flywheel body in an assembled state in which said crankshaft, said elastic plate, said flywheel body and said reinforcing member are assembled in a unit.

127. <sup>27</sup> A flywheel assembly as set forth in Claim <sup>21</sup>121, wherein said side surface of said flywheel body comprises an outer side surface section which faces toward said elastic plate and which is fastened to an outer portion of said elastic plate and an inner side surface section which faces toward said elastic plate, which is surrounded by said outer side surface section of said flywheel body, and which is raised from said outer side surface section axially toward said elastic plate.

128. <sup>41</sup> A flywheel assembly of a power transmission system for transmitting engine torque, said flywheel assembly comprising:

a crankshaft;

an elastic plate comprising an inner portion secured to a shaft end of said crankshaft;

a flywheel body secured to said elastic plate and having an engaging surface for engaging with the clutch disc; and

a reinforcing member for reinforcing said elastic plate at said inner portion of said elastic plate;

wherein said engaging surface has an axial run-out which is no more than 0.1 mm;

wherein said elastic plate is clamped axially between said reinforcing member and said shaft end of said crankshaft, and

wherein a first portion of said flywheel moves axially with respect to said reinforcing member and said elastic plate,

wherein said reinforcing member has a radially extending portion which extends at least inwardly of said flywheel body, and wherein said elastic plate comprises a first portion, said first portion of said flywheel body being placed axially after said first portion of said elastic plate, and said first portions of said flywheel body and said elastic plate defining a first clearance, and said flywheel body having a first free space on a side opposite of the flywheel facing the elastic plate for allowing said first portion of said flywheel body to move axially within the first clearance and the free space.

<sup>42</sup>  
~~129.~~ A flywheel assembly as claimed in Claim <sup>41</sup>~~128~~, wherein said flywheel body comprises an inner portion defining a circular central hole, and an outer portion surrounding said inner portion of said flywheel body; said elastic plate comprises an outer portion which surrounds said inner portion of said elastic plate and which is fixed to said outer portion of said flywheel body; said reinforcing member is fit in said central hole of said flywheel body with a clearance to form a loose fit; and said reinforcing member comprises an outer circumferential surface for allowing said inner portion of said flywheel body to move axially to said elastic plate without limiting an axial movement of the inner portion of said flywheel body toward said elastic plate.

<sup>43</sup>  
130. A flywheel assembly as set forth in Claim <sup>42</sup>129, wherein said reinforcing member extends axially from a first member end defined by a radially extending abutment surface held in contact with said elastic plate, to a second member end; said outer circumferential surface of said reinforcing member extends continuously from said abutment surface toward said second member end of said reinforcing member; said outer circumferential surface of said reinforcing member comprises an outer cylindrical surface section fit in said central hole of said flywheel body, and an outer curved surface section which extends continuously from said outer cylindrical surface section to said abutment surface; and said curved surface section is a surface of revolution whose diameter decreases from a diameter of said cylindrical surface section toward said abutment surface.

<sup>44</sup>  
131. A flywheel assembly as set forth in Claim <sup>43</sup>130, wherein said flywheel body comprises a side surface facing toward said elastic plate, and said engaging surface which faces away from said elastic plate and which extends in an imaginary flat plane; and said second member end of said reinforcing member is located axially between said engaging surface and said side surface of said flywheel body and away from said imaginary flat plane.

<sup>45</sup>  
132. A flywheel assembly as set forth in Claim <sup>41</sup>128, wherein said flywheel body comprises an inner portion defining a circular central hole, and an outer portion surrounding said inner portion of said flywheel body; said elastic plate comprises an outer portion which surrounds said inner portion of said elastic plate and which is fixed to said outer portion of said flywheel body; and said reinforcing member comprises an outer circumferential surface allowing said inner portion of said flywheel body to move axially toward said elastic plate without limiting an axial movement of the inner portion of said flywheel body toward said elastic plate.

<sup>46</sup>  
133. A flywheel assembly as set forth in Claim <sup>41</sup>128, wherein said flywheel body comprises a side surface facing toward said elastic plate, and said engaging surface which faces away from said elastic plate; and said reinforcing member comprises a radially extending abutment surface held in contact with said elastic plate, and an outer circumferential curved surface which extends continuously from said abutment surface to a

curved surface end which is located axially between said side surface of said flywheel body and said engaging surface of said flywheel body.

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*cont*  
<sup>47</sup>  
~~134.~~ A flywheel assembly as set forth in Claim <sup>46</sup>~~133~~, wherein said outer circumferential curved surface of said reinforcing member is a surface of revolution whose diameter increases from said abutment surface of said reinforcing member to said curved surface end of said outer circumferential curved surface.

<sup>48</sup>  
~~135.~~ A flywheel assembly as set forth in Claim <sup>46</sup>~~133~~, wherein said reinforcing member extends axially from a first member end defined by said abutment surface to a second member end which is located axially between said engaging surface and said side surface of said flywheel body; and an axial distance of said second member end of said reinforcing member from said abutment surface of said reinforcing member is smaller than an axial distance of said engagement surface of said flywheel body from said abutment surface of said reinforcing member.

<sup>49</sup>  
~~136.~~ A flywheel assembly as set forth in Claim <sup>46</sup>~~133~~, wherein said engaging surface of said flywheel body extends in an imaginary flat plane; and said reinforcing member extends axially from a first member end defined by said abutment surface to a second member end which is located axially between said engaging surface and said side surface of said flywheel body and which is away from said imaginary flat plane.

<sup>50</sup>  
~~137.~~ A flywheel assembly as set forth in Claim <sup>49</sup>~~136~~, wherein said flywheel body comprises an inner portion defining a circular central hole, and an outer portion surrounding said inner portion of said flywheel body; said elastic plate comprises an outer portion which surrounds said inner portion of said elastic plate and which is fixed to said outer portion of said flywheel body; said reinforcing member comprises a received portion which is received in said central hole of said flywheel body; and said outer curved surface of said reinforcing member extends continuously from said abutment surface to said received portion.

<sup>51</sup>  
~~138.~~ A flywheel assembly as set forth in Claim ~~137~~<sup>50</sup>, wherein said received portion of said reinforcing member comprises a cylindrical outside surface received in said central hole of said flywheel body, and the diameter of said curved surface increases continuously from said abutment surface to a diameter of said cylindrical surface of said reinforcing member.

<sup>52</sup>  
~~139.~~ A flywheel assembly as set forth in Claim ~~136~~<sup>49</sup>, wherein said engaging surface of said flywheel body is formed so as to make the axial run-out no more than 0.1 mm by processing said engaging surface of said flywheel body in an assembled state in which said crankshaft, said elastic plate, said flywheel body and said reinforcing member are assembled in a unit.

<sup>28</sup>  
~~140.~~ A flywheel assembly according to claim ~~113~~<sup>13</sup>, wherein said first portions of said flywheel body and said elastic plate define a space consisting essentially of said first clearance.

<sup>29</sup>  
~~141.~~ A flywheel assembly according to claim ~~113~~<sup>13</sup>, wherein said first portion of said flywheel body slidably contacts an axial surface of said radially extending portion of said reinforcing member.

<sup>30</sup>  
~~142.~~ A flywheel assembly according to claim ~~113~~<sup>13</sup>, wherein said flywheel body axially moves corresponding to said axial rigidity of said elastic plate in the range of 600 kg/mm to 2200 kg/mm without contact on its radial surfaces when said flywheel is engaged and disengaged.

<sup>53</sup>  
~~143.~~ A flywheel assembly according to claim ~~128~~<sup>41</sup>, wherein said first portions of said flywheel body and said elastic plate define a space consisting essentially of said first clearance.

<sup>54</sup>  
144. A flywheel assembly according to claim <sup>41</sup>128, wherein said first portion of said flywheel body slidably contacts an axial surface of said radially extending portion of said reinforcing member.

<sup>55</sup>  
145. A flywheel assembly according to claim <sup>41</sup>128, wherein said elastic plate has an axial rigidity in the range of 600 kg/mm to 2200 kg/mm so as to ensure transmission of engine torque through said flywheel assembly, while decreasing noise produced by a bending vibration of said crankshaft; and wherein said flywheel body axially moves corresponding to said axial rigidity of said elastic plate in the range of 600 kg/mm to 2200 kg/mm without contact on its radial surfaces when said flywheel is engaged and disengaged.

<sup>31</sup>  
146. A flywheel assembly as set forth in claim <sup>13</sup>113, wherein said axial rigidity is in the range of 600 kg/mm to 1700 kg/mm.

<sup>32</sup>  
147. A flywheel assembly as set forth in claim <sup>31</sup>146, wherein an axial run-out of said engaging surface when rotated by said crankshaft is no more than 0.1 mm.

<sup>33</sup>  
148. A flywheel assembly according to claim <sup>13</sup>113, wherein said elastic plate is clamped axially between said reinforcing member and said shaft end of said crankshaft by a fastening means.

<sup>34</sup>  
149. A flywheel assembly according to claim <sup>13</sup>113, wherein said elastic plate is circular and comprises an outer peripheral portion (2b) surrounding said first portion of said elastic plate, so that said first portion of said elastic plate is an inner portion of said elastic plate, said flywheel body comprises an outer peripheral portion (5a) which surrounds said first portion of said flywheel body, so that said first portion of said flywheel body is an inner portion of said flywheel body, said outer peripheral portions of said elastic plate and said flywheel body are fastened together by a second fastening means (6), said inner portion of said flywheel body comprises an inwardly facing inside cylindrical surface defining a central circular hole (5b), said reinforcing member comprises a cylindrical portion (4a) which is received in said circular hole (5b) of said flywheel body, and

comprises an outwardly facing outside cylindrical surface surrounded by said inwardly facing cylindrical surface of said flywheel body.

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cont

<sup>35</sup>  
150. A flywheel assembly according to claim <sup>34</sup>149, wherein said inner portion of said flywheel body comprises a first surface (5f) which is parallel to said engaging surface (5g) and which faces toward said elastic plate, and a second surface (5d) which is parallel to said engaging surface, said inner portion of said elastic plate comprising an abutting surface confronting said first surface of said flywheel body and limiting an axial movement of said inner portion of said flywheel body by abutting against said first surface of said flywheel body.

<sup>36</sup>  
151. A flywheel assembly according to claim <sup>35</sup>150, wherein said second surface (5d) of said inner portion of said flywheel body is located axially between said first surface (5f) and said engaging surface (5g) of said flywheel body.

<sup>37</sup>  
152. A flywheel assembly as set forth in claim <sup>13</sup>143, wherein:  
said elastic plate is a circular elastic plate (2) which further comprises an outer portion, and said inner portion extends radially inwardly from said outer portion to said inner portion;

said fly wheel body is an annular flywheel body (5) which comprises an outer portion and an inner portion and extending radially inwardly from said outer portion to said inner portion of said flywheel body, said outer portion of said flywheel body being fastened to said outer portion of said elastic plate, said inner portion of said flywheel body comprising a central circular hole; and

said reinforcing member further comprises a cylindrical portion (4a) axially extending from a first member end to a second member end, an inner portion extending radially inwardly from said first member end of said cylindrical portion, and an outward flange (4b) extending radially outwardly from said second member end of said cylindrical portion, said inner portion of said reinforcing member being fastened to said shaft end of said crankshaft, said cylindrical portion of said reinforcing member being fit in said circular hole of said flywheel body with a clearance to form a loose fit;

wherein said inner portion of said elastic plate is fixedly clamped between said shaft end of said crankshaft and said inner portion of said reinforcing member, said inner portion of said flywheel body is fit over said cylindrical portion of said reinforcing member.

<sup>38</sup>  
153. A flywheel assembly according to claim <sup>37</sup>152, wherein a wall thickness of said inner portion of said reinforcing member is greater than a wall thickness of each of said outward flange of said reinforcing member and said inner portion of said elastic plate, said wall thickness of each of said inner portion and said outward flange of said reinforcing member and said inner portion of said elastic plate being a dimension measured in an axial direction parallel to an axis of said crankshaft.

<sup>39</sup>  
154. A flywheel assembly according to claim <sup>37</sup>152, further comprising a first fastening means for fastening said outer portions of said elastic plate and said flywheel body together, and a second fastening means for fastening said inner portions of said elastic plate and said reinforcing member to said shaft end of said crankshaft, each of said first and second fastening means comprises screw fasteners extending axially along an axis of said crankshaft.

<sup>56</sup>  
155. A flywheel assembly as set forth in claim <sup>41</sup>128, wherein said elastic plate has an axial rigidity in the range of 600 kg/mm to 2200 kg/mm so as to ensure transmission of engine torque through said flywheel assembly, while decreasing noise produced by a bending vibration of said crankshaft.

<sup>57</sup>  
156. A flywheel assembly according to claim <sup>56</sup>155, wherein said elastic plate is clamped axially between said reinforcing member and said shaft end of said crankshaft by a fastening means.

<sup>59</sup>  
157. A flywheel assembly according to claim <sup>41</sup>128, wherein said elastic plate is circular and comprises an outer peripheral portion (2b) surrounding said first portion of said elastic plate, so that said first portion of said elastic plate is an inner portion of said elastic plate, said flywheel body comprises an outer peripheral portion (5a) which



surrounds said first portion of said flywheel body, so that said first portion of said flywheel body is an inner portion of said flywheel body, said outer peripheral portions of said elastic plate and said flywheel body are fastened together by a second fastening means (6), said inner portion of said flywheel body comprises an inwardly facing inside cylindrical surface defining a central circular hole (5b), said reinforcing member comprises a cylindrical portion (4a) which is received in said circular hole (5b) of said flywheel body, and comprises an outwardly facing outside cylindrical surface surrounded by said inwardly facing cylindrical surface of said flywheel body.

<sup>60</sup>  
158. A flywheel assembly according to claim 157, wherein said inner portion of said flywheel body comprises a first surface (5f) which is parallel to said engaging surface (5g) and which faces toward said elastic plate, and a second surface (5d) which is parallel to said engaging surface, said inner portion of said elastic plate comprising an abutting surface confronting said first surface of said flywheel body and limiting an axial movement of said inner portion of said flywheel body by abutting against said first surface of said flywheel body.

<sup>61</sup>  
159. A flywheel assembly according to claim 158, wherein said second surface (5d) of said inner portion of said flywheel body is located axially between said first surface (5f) and said engaging surface (5g) of said flywheel body.

<sup>62</sup>  
160. A flywheel assembly as set forth in claim 128, wherein:  
\_\_\_\_\_ said elastic plate is a circular elastic plate (2) which further comprises an outer portion, and said inner portion extends radially inwardly from said outer portion to said inner portion;

<sup>41</sup>  
\_\_\_\_\_ said fly wheel body is an annular flywheel body (5) which comprises an outer portion and an inner portion and extending radially inwardly from said outer portion to said inner portion of said flywheel body, said outer portion of said flywheel body being fastened to said outer portion of said elastic plate, said inner portion of said flywheel body comprising a central circular hole; and

\_\_\_\_\_ said reinforcing member further comprises a cylindrical portion (4a) axially extending from a first member end to a second member end, an inner portion

extending radially inwardly from said first member end of said cylindrical portion, and an outward flange (4b) extending radially outwardly from said second member end of said cylindrical portion, said inner portion of said reinforcing member being fastened to said shaft end of said crankshaft, said cylindrical portion of said reinforcing member being fit in said circular hole of said flywheel body with a clearance to form a loose fit;

wherein said inner portion of said elastic plate is fixedly clamped between said shaft end of said crankshaft and said inner portion of said reinforcing member, said inner portion of said flywheel body is fit over said cylindrical portion of said reinforcing member.

*I2 cont*  
<sup>58</sup> 161. A flywheel assembly according to claim <sup>56</sup> 155, wherein said elastic plate has an axial rigidity which is in the range of 600 kg/mm to 1700 kg/mm.

<sup>63</sup> 162. A flywheel assembly according to claim <sup>62</sup> 160, wherein a wall thickness of said inner portion of said reinforcing member is greater than a wall thickness of each of said outward flange of said reinforcing member and said inner portion of said elastic plate, said wall thickness of each of said inner portion and said outward flange of said reinforcing member and said inner portion of said elastic plate being a dimension measured in an axial direction parallel to an axis of said crankshaft.

<sup>64</sup> 163. A flywheel assembly according to claim <sup>62</sup> 160, further comprising a first fastening means for fastening said outer portions of said elastic plate and said flywheel body together, and a second fastening means for fastening said inner portions of said elastic plate and said reinforcing member to said shaft end of said crankshaft, each of said first and second fastening means comprises screw fasteners extending axially along an axis of said crankshaft.

<sup>40</sup> 164. A flywheel assembly according to claim <sup>13</sup> 113, wherein said radially extending portion further comprises a radially extending section (4b) at least partially overlapping the first portion of said flywheel body in a radial direction.

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165.

4)

A flywheel assembly according to claim 128, wherein said radially extending portion further comprises a radially extending section (4b) at least partially overlapping the first portion of said flywheel body in a radial direction.

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cont

In view of the withdrawal of the restriction requirement as set forth on page 8 of the outstanding Office Action, method claims 69-100 have been canceled without prejudice or disclaimer. Applicants intend to file a divisional application directed to these method claims. New product claims 101 to 165 have been added. Product claim 101 corresponds to original patent claim 1. The remaining product claims correspond to previously pending product or method claims as set forth in the following chart and address the Section 112, second paragraph rejections raised in the Office Action dated February 24, 2000.

New Product Claims	Previous Product Claims	New Product Claims	Previous Product Claims	New Product Claims	Previous Product Claims
102	2	130	33	158	63
103	3	131	34	159	64
104	4	132	35	160	65
105	5	133	36	161	66
106	6	134	37	162	67
107	7	135	38	163	68
108	8	136	39	164	Method claim 87
109	9	137	40	165	Method claim 97
110	10	138	41		
111	11	139	42		
112	12	140	44		
113	16 & 43	141	45		
114	17	142	46		
115	18	143	48		
116	19	144	49		
117	20	145	50		
118	21	146	51		
119	22	147	52		
120	23	148	53		
121	24	149	54		
122	25	150	55		
123	26	151	56		
124	27	152	57		
125	28	153	58		
126	29	154	59		
127	30	155	60		
128	31 & 47	156	61		
129	32	157	62		

Upon entry of the amendment, claims 101 to 165 are pending in the application. All of the changes made to the pending claims during this reissue proceeding are shown in the above rewritten claims with appropriate underlining to show the additions, and brackets to show the deletions, in accordance with 37 C.F.R. § 1.121(b). An explanation of the support in the disclosure of the patent for each of these changes to the claims is provided in the remarks accompanying the amendment filed on November 17, 1998 and above. Moreover, a Second Supplemental Reissue Declaration covering some of the changes made by this Amendment and all previous amendments was filed on November 17, 1998. A Third Supplemental Reissue Declaration covering changes made by this Amendment and not covered by a prior declaration will be submitted upon a finding that the application is in condition for allowance in accordance with MPEP 1444 at page 1400-31 (July 1998 edition).

#### **Paragraphs 5 and 6 of the Office Action -- Objection To The Drawings**

The objections to the drawings are rendered moot in view of the cancellation of the method claims and presentation of previously pending and examined product claims, which claims did not raise an objection to the drawings.

#### **Paragraph 7 of the Office Action --New Matter Objection**

The Examiner objects to the amendment filed on October 30, 2000 because it allegedly introduces new matter into the specification. Applicants disagree and submit that no new matter has been presented. However, this objection has been mooted in view of the cancellation of the method claims and presentation of previously pending and examined product claims along with the amendment to the specification set forth in the foregoing amendment. The amendment to the specification is made in response to the Examiner's objection set forth in paragraph 5 of the February 24, 2000 final Office Action finally rejecting the product claims.

**Paragraph 8 of the Office Action – New Matter Rejection Under  
35 U.S.C. § 251**

Applicants submit that the new matter rejection regarding the movement of the flywheel body is mooted in view of the cancellation of the method claims and presentation of previously pending and examined product claims, which claims did not raise new matter rejection under section 251. With respect to the objection of "1 mm," applicants have corrected the enclosed claims to recite "0.1 mm."


**Paragraph 9 of the Office Action -- Improper Recapture Rejection  
Under 35 U.S.C. § 251**

Claims 69-100 stand rejected under 35 U.S.C. § 251 as being improper recapture of broadened claimed subject matter which had been previously surrendered. For the reasons set forth at the August 1, 2001 interview and those set forth in the amendment filed on December 3, 1999 and October 4, 2000, the substance of which is incorporated herein by reference, Applicants submit there is no recapture. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

In view of the foregoing, applicants respectfully submit that this reissue application is now in condition for allowance. Early issuance of a Notice of Allowance is respectfully requested. If the Examiner Luong has any questions or comments that could place this application into even better form, he is encouraged to contact the Applicants' undersigned representative at the number listed below.

Respectfully submitted,

Date August 13, 2001  
FOLEY & LARDNER  
Washington Harbour  
3000 K Street, N.W., Suite 500  
Washington, D.C. 20007-5109  
Telephone: (202) 672-5300  
Facsimile: (202) 672-5399

By   
Richard L. Schwaab  
Reg. No.: 25,479  
Todd J. Burns  
Reg. No.: 38,011

Should additional fees be necessary in connection with the filing of this paper, or if a petition for extension of time is required for timely acceptance of same, the Commissioner is hereby authorized to charge Deposit Account No. 19-0741 for any such fees; and applicant(s) hereby petition for any needed extension of time.